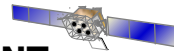

**C2ISR
Enterprise Management
&
MC2C**

Brig Gen (S) Brad Butler, ESC/CX

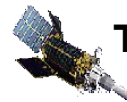
12 June 02

Today's Operational Reality

National
IMINT/SIGINT



TBM Warning



Multi-Int



AMTI/BM



GMTI/BM



SIGINT



TPED



C2



IMINT

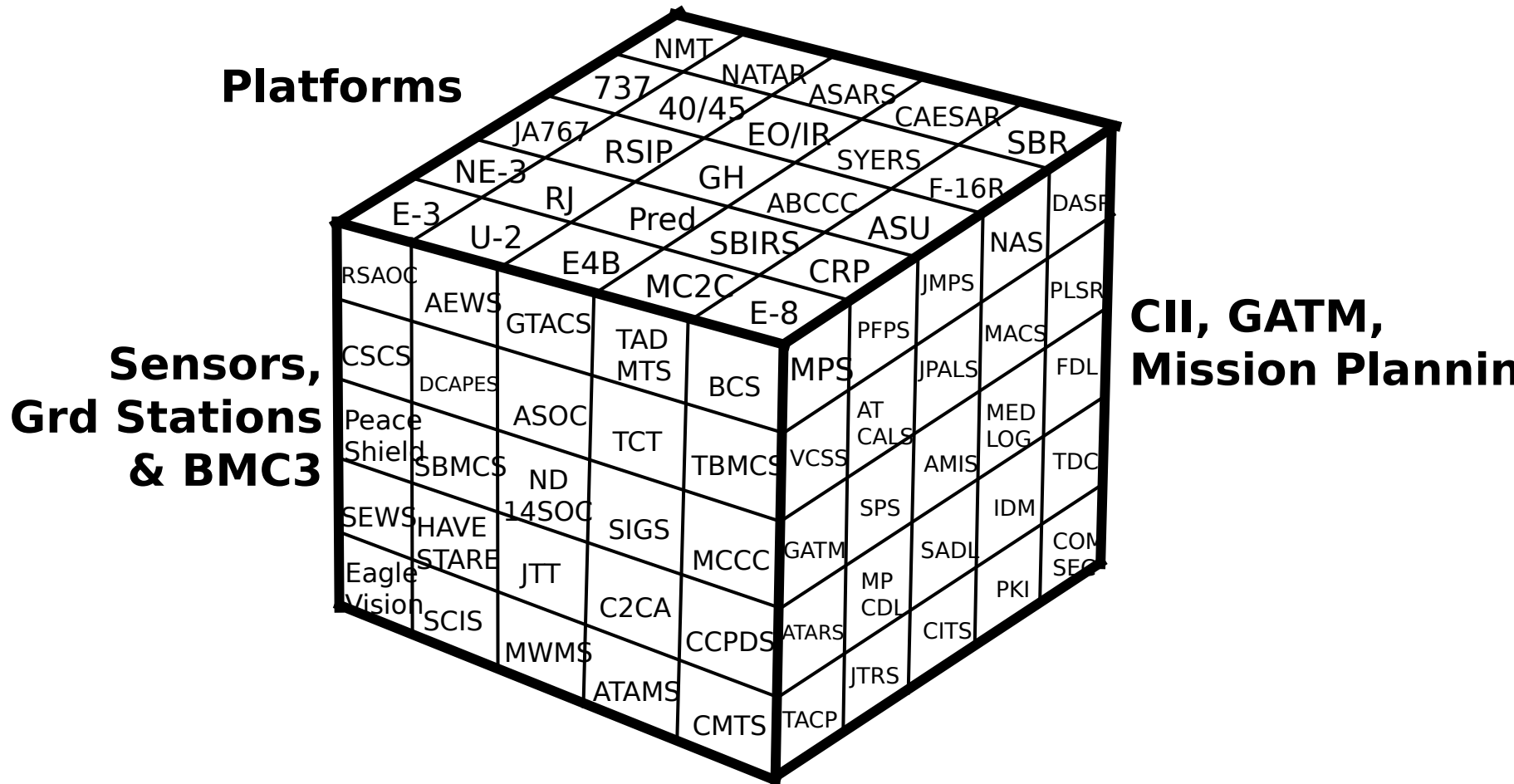


Deficiencies

- Stove-pipe systems
- Lack of bandwidth
- Labor intensive collection / coord
- Difficult to build recognized operational picture
- Little interoperability
- Large forward footprint
- Non-standard C2 centers
- Scattered battlespace snapshots

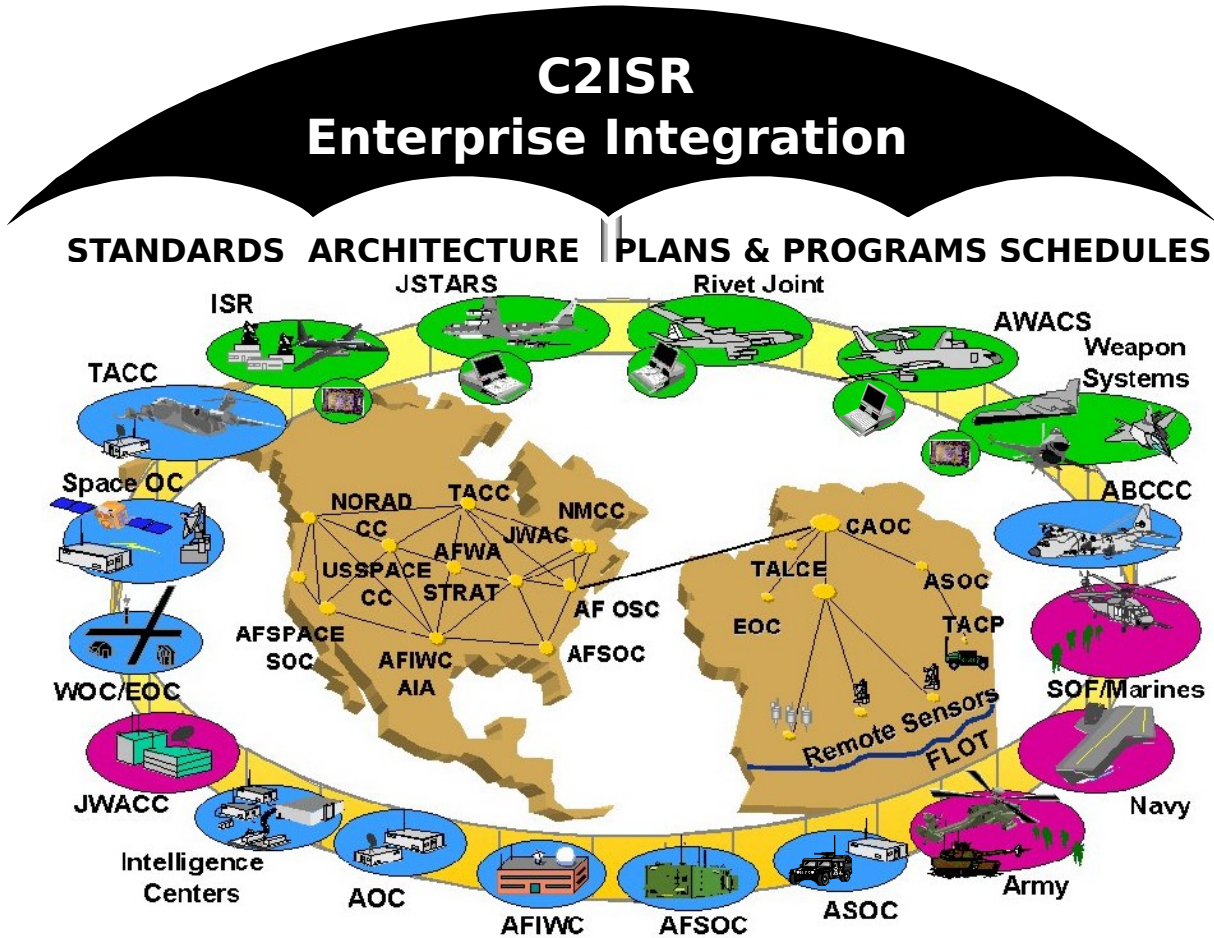
"Data Overloaded, Information Starved"
-- SAB

C2ISR Integration “The Challenge”



**Different Mixes for Different Task Forces
“Overarching Systems Engineering Required”**

Managing the AF C2ISR Enterprise



ESC/CX appointed as Deputy Commander for C2 Enterprise Integration

**Capability/Node
Managers deliver
capability to the
warfighter**

**ESC/DI, Defense
Information
Infrastructure Office
established to Develop
Common Integrated
Infrastructure &
Technical Standards**

Common Integrated Infrastructure (CII)

Common Operator & Developer Framework

Multi-sensor C2 Constellation Definition

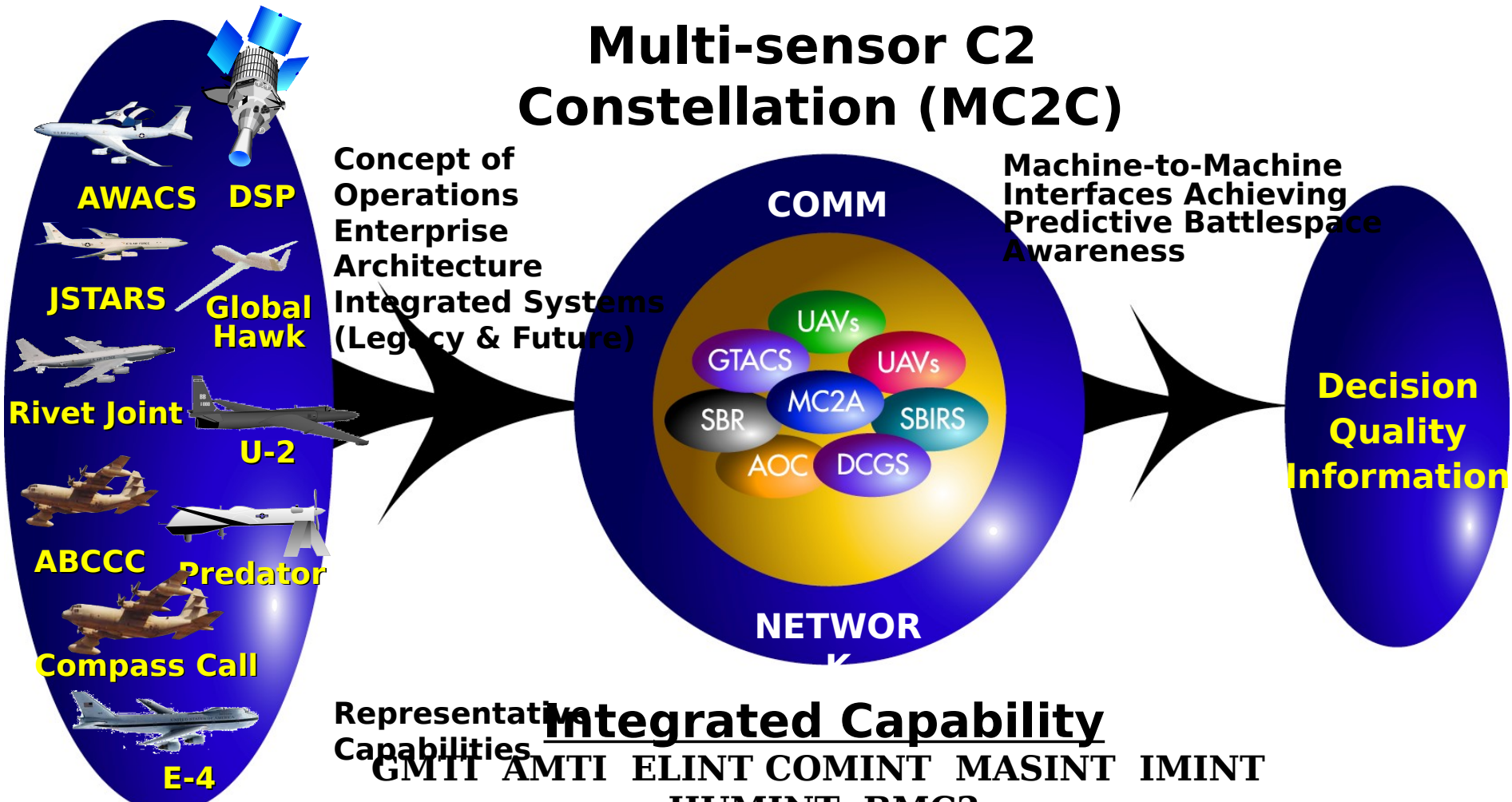
MC2C is a networked system of systems information exchange environment, the backbone for implementing the Air & Space Expeditionary Forces CONOPS and the enabler for current and future air/ground/space C2ISR.

Mission

Horizontally integrate AF C2ISR to deliver decision quality information to the warfighter, independent of any new

Addresses Operational Deficiencies Today!
capabilities supporting every Task Force.

Air Force Horizontally Integrated C2ISR Vision

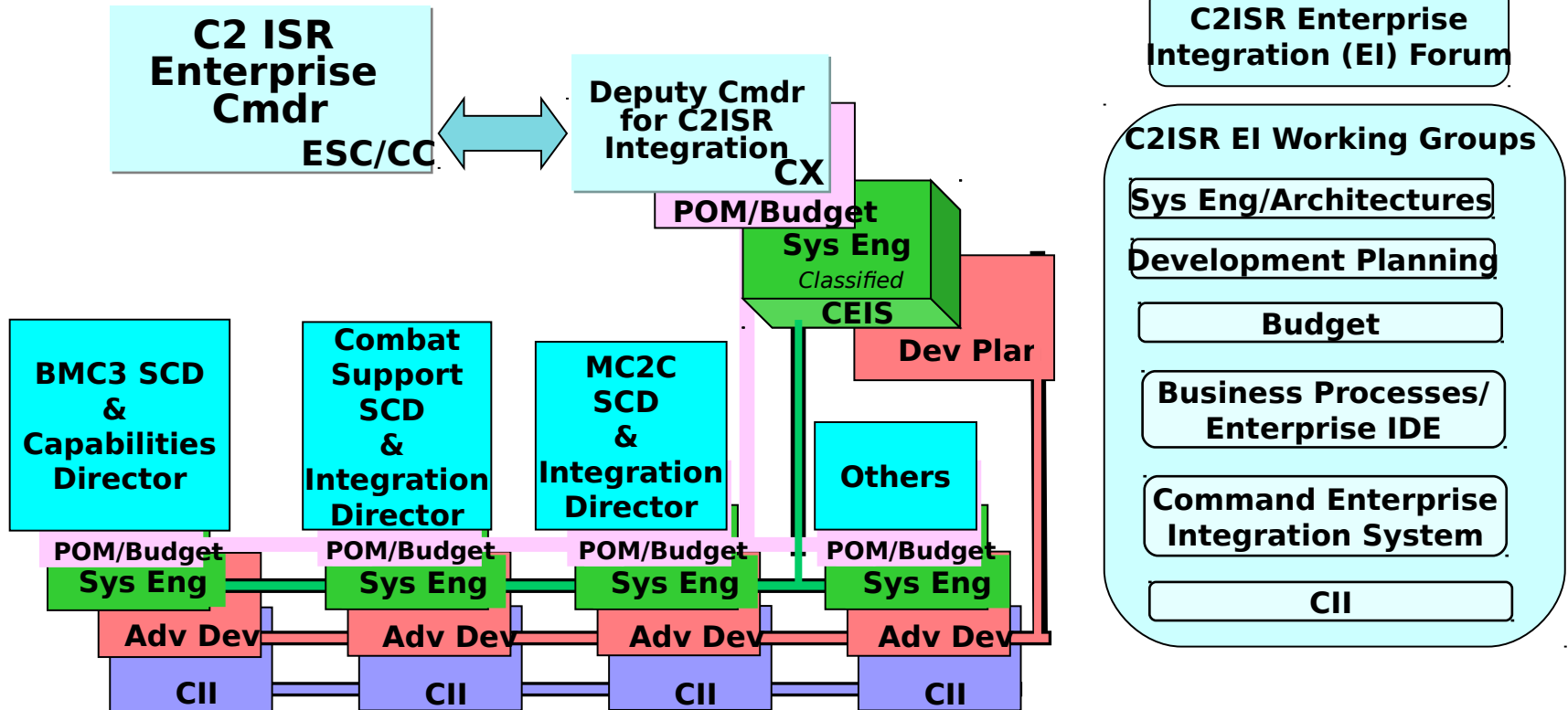


Enterprise Architectures, System of System Engineering, to Achieve Interoperability Across Service, Agency, Joint, Coalition Systems Enabling Integrated & Interoperable Warfighting Capabilities

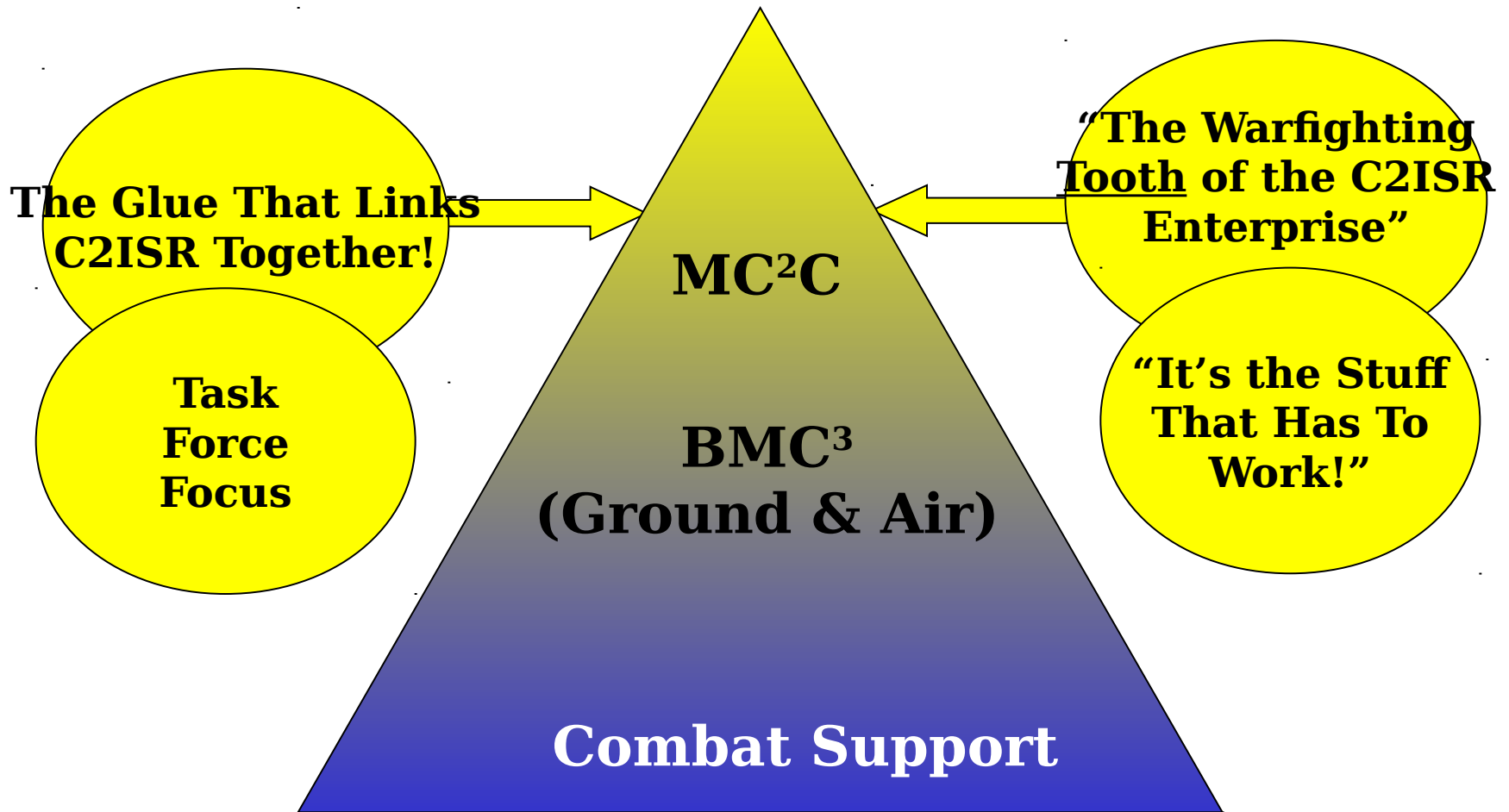
C2ISR Integration

'Establishing the Integration Framework'

Directorate
Of
Warfighter Integration
AF/XI



C2ISR Integration Buckets

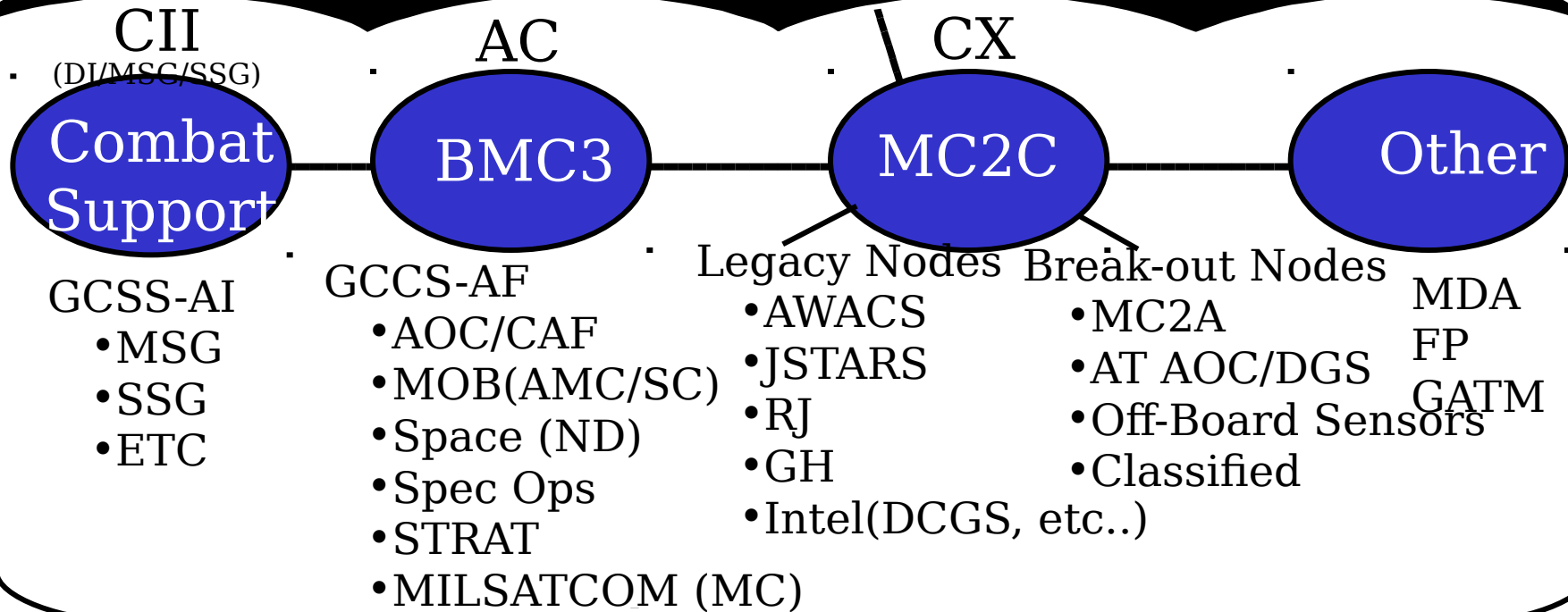


MC2C Leads the Way --- Capability Focus!

Coalition
Joint
GCCS-AF/A/M

CX

C2ISR
Enterprise Integration



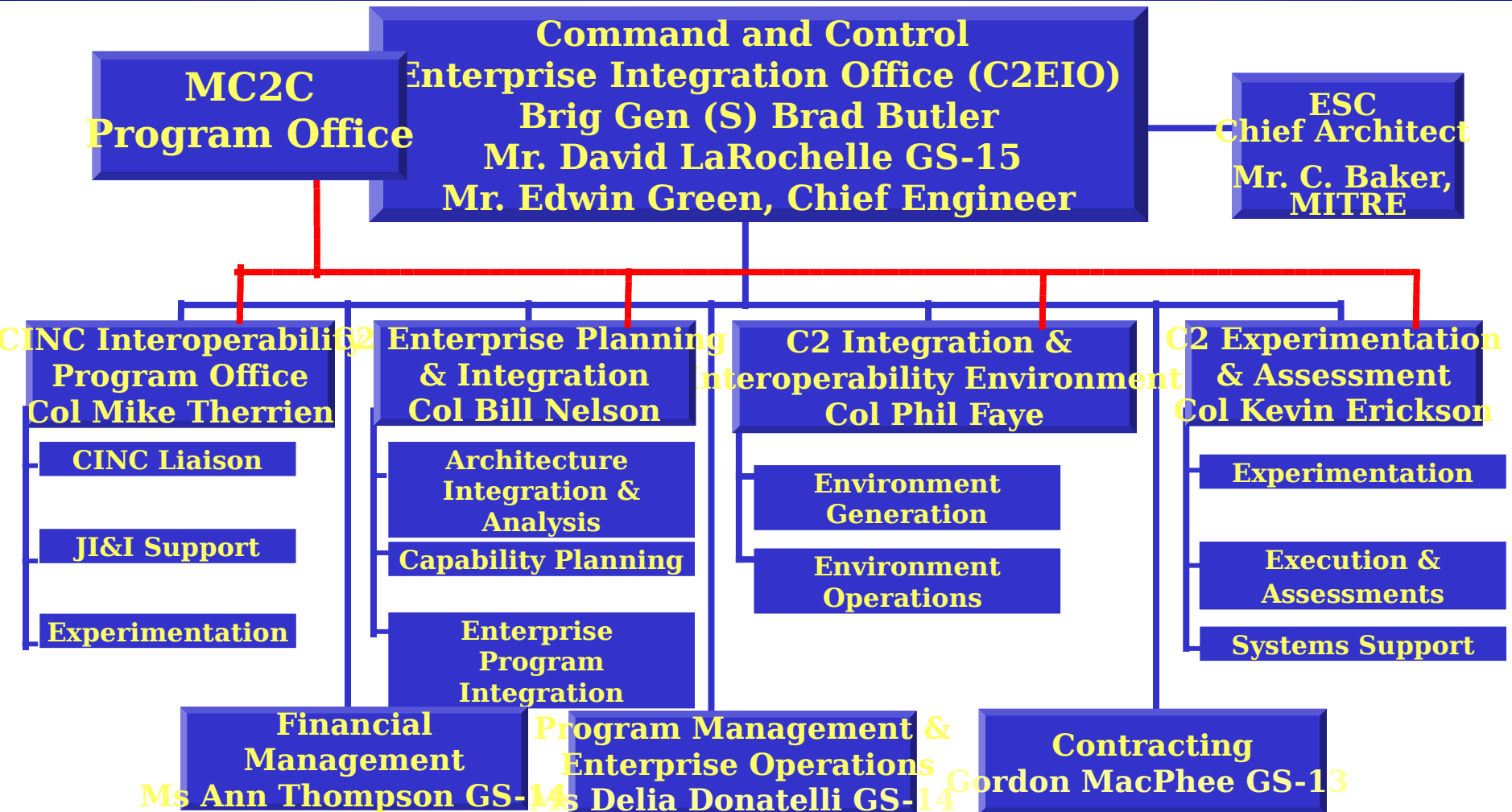
Industry
Joint
Other AF Enterprises
C2ISR Enterprise
Break-out Nodes
Legacy

• **Arch**
 • **Studies**
 • **ACTDs/ATDs/TPIPTs**
 • **Dev/Capabilities Planning**
 • **JDEP/JSB/JEFX/BLabs**
 • **Labs & Platforms (e.g. 707-X)**
 • **Programs IMP/IMS--\$**
 • **Capabilities & Gaps (CBRA)**

Task Force
&

CONOPS

CX Organization



The MC2C Team Will.....

- Embrace Innovation - Lead a collaborative government-industry C2ISR systems engineering effort supported by Distributed Networked Facilities and Advanced Simulation Environments
- “Glue” the AF C2ISR systems together...
 - Air Force C2ISR “Network” (not just the pipes but the network)
 - Fusion/Correlation of C2ISR data into information
 - Means to task/assess/optimize/retask within the Constellation to address warfighter needs across the spectrum of conflict
- Exercise overall responsibility to ensure delivery of integrated capabilities (sensors, platforms, comm, tools...) through System Pro

“The Best Way to Predict the Future is to Invent it”

MC2C Program Office Tenets

- Develop Constellation Architecture/Roadmap
- Implement System of Systems Engineering
- Rapidly Spiral Technical Solutions
- Horizontally Integrate Legacy (NOW!) and Future Systems to Achieve Warfighting Capabilities Affordably
- Provide Interoperability Across Service, Agency, and Coalition Systems

Pathfinder Acquisition Aim Points

- **A 4:1 Reduction in Cycle Time**
- **Hardware to the warfighter as quickly as possible**
 - **Something in hand in 2-4 years**
- **Keep Cost Under Control**
- **Don't Develop via "Big Bang"**
 - **Deliver in increments that meet the warfighter needs**

Acquisition Center of Excellence (ACE)

Pathfinder List

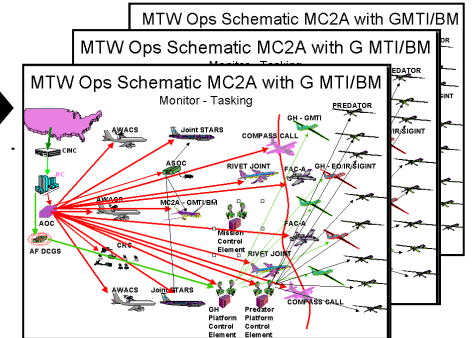
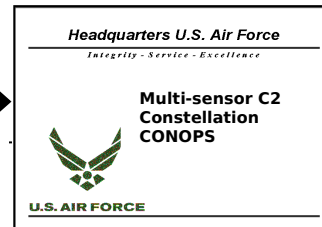
• Space Based Radar	SMC		
• Global Positioning System	SMC		
• Small Diameter Bomb	AAC		
• AC-130 Gunship	ASC/AAC		
• Global Hawk	ASC		
• Combat Search and Rescue	ASC		
• B-2 Radar	ASC		
• Predator B	ASC		
• B-1 Defensive System Upgrade	ASC		
• Unmanned Combat Air Vehicle	ASC		
• C-5 Avionics Modernization Program		ASC	
• Hunter/Killer	ASC		
• Tanker/Lease	ASC		
• KC-767	ASC		
• Network Centric Collaborative Targeting		ASC	Enabler
• DCGS	ESC		
• Multi-Sensor C2 Aircraft	ESC		
• Multi-Sensor C2 Constellation	ESC	Enabler	

Capability-Focused Assessment Process

Task Force CONOPS



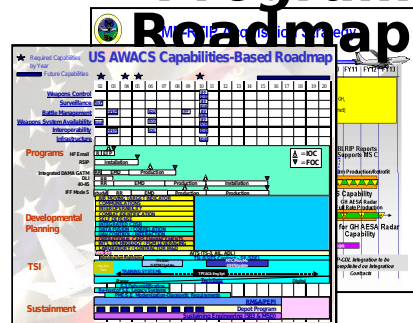
MC2C Architecture: MC2C CONOPS Ops/System/Technical



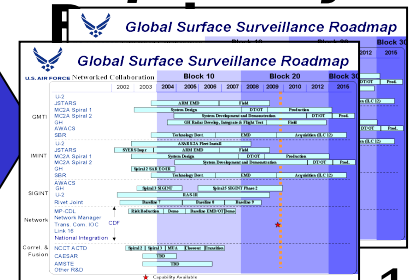
- Air & Space/C2ISR Task Force
- Global Strike Task Force
- Air & Space Expeditionary Task Force
- Global Mobility Task Force
- Homeland Security Task Force
- Nuclear Response Task Force

**CONOPS & Architecture Assessments
Supported by Distributed Networked Facilities
And Advanced Simulation Environments**

Integrated Capabilities



Capability



Integrated Investment Roadmaps

MC2C Spiral Approach

Operator-Acquirer-Industry Collaboration

- 
- Establish baseline constellation CONOPS/architectures/standards
 - Select initial set of C2ISR system models/simulations
 - Release RFP to industry for concept exploration/development
 - Exercise models & develop new concepts
 - Identify horizontal integration options (CONOPS and design)
 - Document best concept solution(s)
 - Demonstrate concepts (e.g. Paul Revere, CEIS, JEFX, etc.)
 - Decision point to modify fleets, further refine concept, or develop needed technology
 - Repeat process building on this new baseline

***Establish environment and process for
continuous assessment and improvement of
horizontal integration***

MC2C Key Events (Draft)

MC2C Industry Recap (11-12 June 02)

Fed Biz Ops/RFI Only - No briefings (~14 days to respond)

Fed Biz Ops/Sources Sought Synopsis/White Paper (~14 Days to respond)

Industry Day

Release Draft RFP

RFP Release

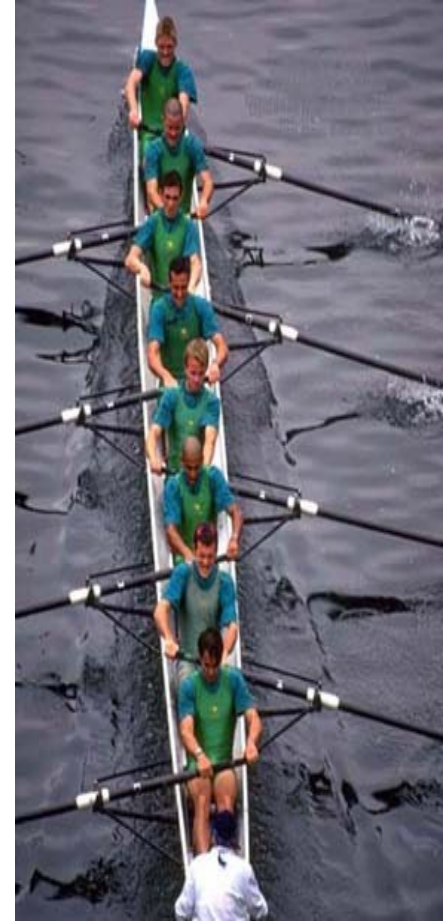
Contract Award

Conclusions

- **Air Force seriously committed to new approach**
 - ***Effects-based acquisition of integrated C2ISR capabilities***
- **Organizational adjustments occurring at every level in the Air Force**
 - **Air Staff, AFMC, ESC, CX and MC2C**
- **MC2C, MC2A, and SBR moving to execution phases**
 - **Focus was planning...now to executing in FY03**

Summary

- **C2 Enterprise Integration is Working**
 - **MC2C Focus is Complimentary - Leads the Way!**
- **Expanding Partnerships across C2**
 - **AFMC Wide Effort**
 - **Links to Joint & Coalition**
 - **Links to Industry and Other Government & Academia Agencies**



Enterprise Integration is a TEAM effort!